

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-20 (Canceled).

Claim 21 (Currently Amended): A soldering flux comprising:

an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and a hardening agent, wherein:

said hardening agent ~~includes~~ including at least two types of carboxylic acids having melting points that are different from each other.

Claim 22 (Previously Presented): The soldering flux of claim 21, assuming a liquid form.

Claim 23 (Previously Presented): The soldering flux of claim 21, assuming a paste form.

Claim 24 (Canceled).

Claim 25 (Currently Amended): The soldering flux of claim ~~24~~ 21, wherein:

said thermo-setting resin is selected from the group consisting of epoxy resin, phenol resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 26 (Previously Presented): The soldering flux of claim 21 wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 27 (Previously Presented): The soldering flux of claim 26, represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 28 (Previously Presented): The soldering flux of claim 21, wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 29 (Previously Presented): The soldering flux of claim 28, represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 30 (Currently Amended): A soldering paste comprising:
soldering powder; and
a soldering flux mixed with said soldering powder, wherein:
said soldering flux comprises an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and a hardening agent, and
said hardening agent ~~includes~~ including at least two types of carboxylic acids having melting points that are different from each other.

Claim 31 (Canceled).

Claim 32 (Currently Amended): The soldering paste of claim ~~31~~ 30, wherein:
said thermo-setting resin is selected from the group consisting of epoxy resin, phenol resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 33 (Previously Presented): The soldering paste of claim 30 wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 34 (Previously Presented): The soldering paste of claim 33, represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 35 (Previously Presented): The soldering paste of claim 30, wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 36 (Previously Presented): The soldering paste of claim 35, represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 37 (Previously Presented): The soldering paste of claim 30, wherein:
said soldering powder includes a component selected from the group consisting of Sn, Cu, Ag, Sb, Pb, In, Zn and Bi.

Claim 38 (Currently Amended): An electronic component device comprising:
a component mounting board;
an electronic component soldered onto said component mounting board; and
a soldering flux between said component mounting board and said electronic component to bond said component mounting board and said electronic component to each other, wherein:
said soldering flux comprises an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and a hardening agent, and said hardening agent ~~includes~~ including at least two types of carboxylic acids having melting points that are different from each other.

Claim 39 (Previously Presented): The electronic component device of claim 38, wherein:
said soldering flux assumes a liquid form.

Claim 40 (Previously Presented): The electronic component device of claim 38, wherein:
said soldering flux assumes a paste form.

Claim 41 (Canceled).

Claim 42 (Currently Amended): The electronic component device of claim 41 38,
wherein:

said thermo-setting resin is selected from the group consisting of epoxy resin, phenol resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 43 (Previously Presented): The electronic component device of claim 38
wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 44 (Previously Presented): The electronic component device of claim 43,
represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 45 (Previously Presented): The electronic component device of claim 38,
wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 46 (Currently Amended): The electronic component device of claim 35 45,
represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 47 (Currently Amended): An electronic circuit module comprising:
a chip mounting board;
a semiconductor chip having at least one semiconductor element soldered onto said chip mounting board; and
a soldering flux between said chip mounting board and said semiconductor chip to bond said chip mounting board and said semiconductor chip to each other, wherein:
said soldering flux comprises an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and a hardening agent, and said hardening agent ~~includes~~ including at least two types of carboxylic acids having melting points that are different from each other.

Claim 48 (Previously Presented): The electronic circuit module of claim 47, wherein:
said soldering flux assumes a liquid form.

Claim 49 (Previously Presented): The electronic circuit module of claim 47, wherein:
said soldering flux assumes a paste form.

Claim 50 (Canceled).

Claim 51 (Previously Presented): The electronic circuit module of claim ~~50~~ 47,
wherein:

said thermo-setting resin is selected from the group consisting of epoxy resin, phenol resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 52 (Previously Presented): The electronic circuit module of claim 47 wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 53 (Previously Presented): The electronic circuit module of claim 52,
represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 54 (Previously Presented): The electronic circuit module of claim 47, wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 55 (Previously Presented): The electronic circuit module of claim 54,
represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 56 (Currently Amended): An electronic circuit apparatus comprising:
a motherboard;

an electronic circuit module soldered onto said motherboard; and
a soldering flux between said motherboard and said electronic circuit module to bond
said motherboard and said electronic circuit module to each other, wherein:
said soldering flux comprises an adhesive resin including a thermo-setting resin that
starts heat-hardening approximately at the reflow temperature; and a hardening agent, and
said hardening agent ~~includes~~ including at least two types of carboxylic acids having melting
points that are different from each other.

Claim 57 (Previously Presented): The electronic circuit apparatus of claim 56,
wherein:

said soldering flux assumes a liquid form.

Claim 58 (Previously Presented): The electronic circuit apparatus of claim 56,
wherein:

said soldering flux assumes a paste form.

Claim 59 (Canceled).

Claim 60 (Currently Amended): The electronic circuit apparatus of claim ~~59~~ 56,
wherein:

said thermo-setting resin is selected from the group consisting of epoxy resin, phenol
resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 61 (Previously Presented): The electronic circuit apparatus of claim 56
wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 62 (Previously Presented): The electronic circuit apparatus of claim 61, represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 63 (Previously Presented): The electronic circuit apparatus of claim 56, wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 64 (Previously Presented): The electronic circuit apparatus of claim 63, represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 65 (Currently Amended): A soldering method implemented by using a flux,
wherein:

said flux comprises: comprising

an adhesive resin including a thermo-setting resin that starts heat-hardening
approximately at the reflow temperature; and

a hardening agent ~~agent, wherein:~~

~~said hardening agent includes~~ including at least two types of carboxylic acids having melting points that are different from each other.

Claim 66 (Previously Presented): The soldering method of claim 65, implemented to solder any one of an electronic component, an electronic circuit module and a semiconductor chip onto a board.

Claim 67 (Currently Amended): A soldering method implemented by using a soldering paste comprising soldering powder mixed with a soldering flux, wherein:

said soldering flux comprises:

an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and

a hardening agent ~~agent, and said hardening agent includes~~ including at least two types of carboxylic acids having melting points that are different from each other.

Claim 68 (Previously Presented): The soldering method of claim 67, implemented to solder any one of an electronic component, an electronic circuit module and a semiconductor chip onto a board.

Claim 69 (Previously Presented): The soldering method of claim 67, including the steps of:

executing a soldering process at one surface of said board by using said soldering paste, and

soldering an electronic component onto another surface of said board with a solder different from said soldering paste.

Claim 70 (New): A soldering flux comprising:
an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:

the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 71 (New): The soldering flux of claim 70, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow temperature.

Claim 72 (New): A soldering paste comprising:
soldering powder; and
a soldering flux mixed with said soldering powder, said soldering flux comprising:
an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:
the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 73 (New): The soldering paste of claim 72, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow temperature.

Claim 74 (New): An electronic component device comprising:
a component mounting board;
an electronic component soldered onto said component mounting board; and
a soldering flux between said component mounting board and said electronic component to bond said component mounting board and said electronic component to each other, wherein:

said soldering flux comprises:

an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:

the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 75 (New): The electronic component device of claim 74, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow
temperature.

Claim 76 (New): An electronic circuit module comprising:
a chip mounting board;
a semiconductor chip having at least one semiconductor element soldered onto said
chip mounting board; and
a soldering flux between said chip mounting board and said semiconductor chip to
bond said chip mounting board and said semiconductor chip to each other, wherein:
said soldering flux comprises:

an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting
points that are different from each other, wherein:
the carboxylic acid with the lower melting point functions as a hardening
agent at the reflow temperature; and
the carboxylic acid with the higher melting point melts at a repair temperature
set higher than the reflow temperature, and thereby lowers the viscosity of said
adhesive resin.

Claim 77 (New): The electronic circuit module of claim 76, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow
temperature.

Claim 78 (New): An electronic circuit apparatus comprising:

a motherboard;
an electronic circuit module soldered onto said motherboard; and
a soldering flux between said motherboard and said electronic circuit module to bond
said motherboard and said electronic circuit module to each other, wherein:

said soldering flux comprises:

an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting
points that are different from each other, wherein:
the carboxylic acid with the lower melting point functions as a hardening
agent at the reflow temperature; and
the carboxylic acid with the higher melting point melts at a repair temperature
set higher than the reflow temperature, and thereby lowers the viscosity of said
adhesive resin.

Claim 79 (New): The electronic circuit apparatus of claim 78, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow
temperature.

Claim 80 (New): A soldering method implemented by using a flux, wherein:
said flux comprises:

an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting
points that are different from each other, wherein:
the carboxylic acid with the lower melting point functions as a hardening
agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 81 (New): The soldering method of claim 80, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow temperature.

Claim 82 (New): The soldering method of claim 80, implemented to solder any one of an electronic component, an electronic circuit module and a semiconductor chip onto a board.

Claim 83 (New): A soldering method implemented by using a soldering paste comprising soldering powder mixed with a soldering flux, wherein:
said soldering flux comprises:

an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:

the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 84 (New): The soldering method of claim 83, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow
temperature.

Claim 85 (New): The soldering method of claim 83, implemented to solder any one
of an electronic component, an electronic circuit module and a semiconductor chip onto a
board.